

REMARKS

This amendment is filed in response to the Office Action dated February 20, 2002. Claims 1-28 are pending. In the Office Action of February 20, 2002, the examiner rejected claims 1-12, 14-17, 20 and 23-28 under 35 U.S.C. § 102(e) as being anticipated by the Zellner et al., U.S. Patent No. 6,026,289 ("Zellner"); and rejected claims 13, 18-19, and 21-22 under 35 U.S.C. § 103(a) as being unpatentable over Zellner in view of Dorenbosch, U.S. Patent No. 5,959,546. The Examiner objected to claims 1, 9, 12-13, 15 and 17, 23-24, and 27-28 due to informalities in the spelling of communication(s) channel(s).

By this amendment, claims 1, 5-10, 12-13, 15-17, 23-24, and 26-28 are amended to more particularly and distinctly claim the invention and address the informalities raised by the Examiner. The Examiner's rejections are traversed below in light of the amended claims.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached document is captioned "Version With Markings To Show Changes Made."

Summary of the Invention

The present invention provides a method and apparatus for providing informative broadcast services in a wireless communication system. The wireless communication system includes a plurality of base stations, each serving a plurality of users via a plurality of communication channels. According to the invention, an alerting message is sent to wireless communication devices associated with the wireless network. The alerting message identifies a communication channel on which a broadcast message will be sent. The alerting message indicates to a user that a broadcast message is available. After the alerting message is given, the broadcast message

is sent over the communication channel. The alerting message and the broadcast message are separate communications. After receiving the alerting message, the user may then decide to receive the broadcast message. Alternatively, the user may ignore the broadcast or toggle between the broadcast and an existing call.

Claims 1-12, 14-17, 20 And 23-28 Are Not Anticipated by Zellner

The Examiner rejected claims 1-12, 14-17, 20 and 23-28 under 35 U.S.C. § 102(e) as being anticipated by Zellner. The Applicant respectfully traverses the rejection with respect to claims 1-12, 14-17, 20 and 23-28 on the basis that these claims include certain novel limitations that are not disclosed by Zellner. In particular, as discussed further below, Zellner fails to disclose, at least, a means or method for initially alerting a user of a wireless unit of availability of a broadcast message prior to delivery of the broadcast message.

The Federal Circuit has stated, in reference to anticipation, that “[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by one of ordinary skill in the field of the invention.” *Scripps Clinic & Research Found. v. Genetech Inc.*, 927 F.2d 1565, 18 USPQ 2d 1001, 1010 (Fed. Cir. 1991).

According to the Examiner, with reference to claim 1, Zellner discloses all the elements of the claim. However, amended claim 1 includes novel elements not disclosed by Zellner. In particular, amended claim 1 includes, *inter alia*:

A method for use in a wireless network, ... comprising the steps of:

transmitting an alert message from a set of said base stations, to a plurality of users, said alert message including the identity of one of said plurality of communication channels, said alert message indicating to said plurality of users that a broadcast message is available; and transmitting said broadcast message....

Zellner discloses a system and method for delivering broadcast information services from broadcasters to remote users over shared channels in a cellular communication system. Zellner discloses two cases wherein a broadcast message is sent. In the first case, a broadcaster of the informational audio service initiates calls to each remote receiver of the broadcast data. In the second case, a call request is initiated by a remote user and the user is placed on a shared channel that includes the broadcast message. Notably, Zellner does not disclose, teach or suggest, alerting a user of the availability of a broadcast message, prior to actual transmission of the broadcast message. In the second case, wherein the user initiates or joins a broadcast channel, the user apparently dials into a broadcast service and the mobile switching center directs the user's wireless device to the shared channel that includes the broadcast message. Zellner does not disclose alerting the user's wireless device to the availability of the broadcast message prior to the user joining the broadcast channel. In the first case where a broadcaster initiates service, the broadcaster apparently calls the remote users who are to receive the broadcast. The remote users are then connected to the broadcast upon answering the call. Zellner does not disclose announcing the availability of the broadcast message prior to transmission of the broadcast message. It appears that the broadcast message of Zellner operates much like a normal call, at least without any user being made aware that the call is a broadcast message.

In contrast to Zellner and the prior art, the present invention advantageously puts a user in control of receiving broadcast messages. This is accomplished by first alerting the user to the availability of a broadcast message. Then the broadcast message is sent over a channel that the user can access at the user's option. Advantageously, the broadcaster need not know which devices/users

to contact for a broadcast message prior to sending the broadcast. This allows the broadcaster to address a much wider audience than that contemplated by Zellner. Zellner lacks, at least, notification via the alerting message, of a broadcast message. Hence, claims 1 is not anticipated by Zellner and is patentable.

Independent claim 12 includes, *inter alia*:

means for receiving a first alerting message indicating that a broadcast message is imminent, and indicating the communication channel of said broadcast message;
means for alerting a user of said wireless unit that said broadcast message is imminent; and
 means for setting up said wireless unit for receiving said communication channel.

Similarly, independent claim 24 includes, *inter alia*:

A base station for use in a wireless network, ...
 comprising:
 means for transmitting an alert message to a plurality of users, said alert message including the identity of one of said plurality of communications channels, said alert message indicating availability of an imminent broadcast message;

And, independent method claim 27 includes, *inter alia* the steps of:

transmitting an alert message from a set of said base stations, to a plurality of users, said alert message including a dialing instruction by which said users may request to receive a broadcast message;
 receiving a call placed by one of said plurality of users in accord with said dialing instruction; and
 responsive to said call, transmitting a broadcast message from at least one of said set of base stations to said one user on one of said plurality of communication channels.

Each of independent claims 12 and 24 requires an alert message indicating a subsequent broadcast message. As discussed above, with respect to claim 1, Zellner does not disclose, suggest or

teach, at least this novel element of the present invention. Additionally, Zellner does not disclose, teach or suggest an alert message including a dialing instructions by which users may request a broadcast message, as recited in claim 27. Hence, independent claims 12, 24 and 27 are novel. In addition Zellner does not make these claims obvious, due in part, to its lack of teaching on a method to alert a user to an imminent broadcast message. The dependent claims 2-11, 13-23, 25-26 and 28 depend ultimately from one of the independent claims, and are patentable for at least the reasons given above for the independent claims.

In addition, claim 3 requires that the alert message include a permission parameter. Zellner checks for user authorization by a cell controller (Zellner, col. 4, lines 9-19). However, in Zellner, a permission parameter is not sent with an alert message for use by the wireless unit itself. Hence, claim 3 is patentable for this additional reason.

Claim 4 requires periodic transmission of the alert message. Zellner lacks this element. Hence claim 4 is patentable for this additional reason.

Claims 5 and 6 require sending a further alert to indicate expiration of the channel and returning the channel for further use, respectively. Zellner lacks these elements and Claims 5 and 6 are patentable for these additional reasons.

Claim 13 requires a second alert message to indicate the end of a broadcast. Zellner does not disclose, teach or suggest this element, making claim 13 patentable over Zellner for this additional reason.

Claims 23 and 28 require means for blocking a reverse link associated with a broadcast transmission. Zellner discloses preventing quality checking on the reverse link of a broadcast transmission, but

does not disclose, teach or suggest complete blocking of the reverse link. Hence claims 23 and 28 are patentable for this additional reason.

The Claims Are Patentable Over Zellner And Dorenbosch

The Examiner rejected claims 13, 18-19, and 21-22 under 35 U.S.C. § 103(a) as being unpatentable over Zellner in view of Dorenbosch. According to the Examiner, Zellner teaches all the elements of the subject claims, except Zellner fails to teach or disclose: (1) receiving a second alerting message indicating that said broadcast message is over and for automatically restoring said wireless unit to said stored state upon receipt of said second alerting message (as recited in claim 13); (2) alerting comprises a user-audible and a user-visible signal (as recited in claims 18 and 19 or 22); and (3) selecting comprises a button separate from said keypad (as recited in claim 21). According to the Examiner, Dorenbosch teaches the elements missing in Zellner. The Examiner concludes that the claims are obvious in view of the combination of Zellner and Dorenbosch.

The Applicant disagrees with the Examiner's conclusion. First, even assuming a combination of Zellner and Dorenbosch is appropriate, such a combination still fails to disclose certain novel elements of the subject claims. Namely, a combination of Zellner and Dorenbosch fails to disclose first alerting the user to the availability of a broadcast message and then the broadcast message being sent over a channel that the user can access at the users option, as discussed above. In addition, Dorenbosch does not even address the problem solved by the present invention. Dorenbosch relates to selective call receiving through addressing. While some audible and visual alerting are mentioned in Dorenbosch, the context there is not applicable to the teachings of the present invention. Hence, there is no motivation for

one of ordinary skill in the art to combine the references to address the problems solved by the present invention.

CONCLUSION

All pending claims are in condition for allowance. Allowance at an early date is solicited.

Respectfully submitted,



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Version With Markings To Show Changes Made

In the Claims:

Claim 1 is amended as follows:

1. (Amended) A method for use in a wireless network, said wireless network comprising a plurality of base stations, each serving a plurality of users via a plurality of communication channels, said method comprising the steps of:

transmitting an alert message from a set of said base stations, to a plurality of users, said alert message including the identity of one of said plurality of ~~communications~~communication channels, said alert message indicating to said plurality of users that a broadcast message is available; and

transmitting a said broadcast message from said set of base stations to said plurality of users on said one of said plurality of ~~communications~~communication channels.

Claim 5 is amended as follows:

5. (Amended) The method of claim 1 further including the step of, after said set of base stations complete transmission of said broadcast message, said set of base stations sending a further alert message to inform the users that ~~the channel~~said one of said plurality of communication channels will expire in a predetermined time.

Claim 6 is amended as follows:

6. (Amended) The method of claim 5 further including, after expiration of said predetermined time, said set of said base stations ceasing to broadcast on said ~~communications~~communication channel, and returning said channel for further use.

Claim 7 is amended as follows:

7. (Amended) The method of claim 1 wherein said one of said plurality of communication channels is selected from a reserved group of said plurality of communication channels.

Claim 8 is amended as follows:

8. (Amended) The method of claim 1 wherein said one of said plurality of communication channels is selected from the list of idle ones of said plurality of communication channels.

Claim 9 is amended as follows:

9. (Amended) The method of claim 1 wherein said alert message includes the identity of said one of said plurality of ~~communications~~ communication channels such that each of said plurality of base stations selects the same one of said plurality of communication channels.

Claim 10 is amended as follows:

10. (Amended) The method of claim 1 wherein each of said plurality of base stations selects one of said plurality of communication channels based on channel availability, wherein said one of said plurality of communication channels ~~channel~~ may be different between each of said base stations.

Claim 12 is amended as follows:

12. (Amended) A wireless unit for use with a wireless communications network, wherein said wireless unit receives control messages on a preassigned channel and communicates content on a channel that is assigned for such communication, said wireless unit comprising:

means for receiving a first alerting message indicating that a broadcast message is imminent, and indicating the communication channel of said broadcast message;

means for alerting a user of said wireless unit that said broadcast message is imminent; and

means for setting up said wireless unit for receiving said ~~communications channels~~ communication channel.

Claim 13 is amended as follows:

13. (Amended) A wireless unit in accordance with claim 12 further comprising:

means for storing a current state of said wireless unit before setting up said wireless unit for receiving said ~~communications channels~~ communication channel; and

means for receiving a second alerting message indicating that said broadcast message is over and for automatically restoring said wireless unit to said stored state upon receipt of said second alerting message.

Claim 15 is amended as follows:

15. (Amended) A wireless unit in accordance with claim 12 wherein said wireless unit uses CDMA protocol, wherein ~~each of said communications channels~~ communication channel is extracted using a corresponding one of a plurality of Walsh functions.

Claim 16 is amended as follows:

16. (Amended) A wireless unit in accordance with claim 12 wherein said wireless unit uses an analog air interface protocol, wherein ~~each of said communications channels~~ communication channel is extracted using an FM receiver tuned to a corresponding frequency.

Claim 17 is amended as follows:

17. (Amended) A wireless unit in accordance with claim 12 wherein said wireless unit uses a TDMA protocol, wherein ~~each of said communications channels~~ communication channel is extracted using a receiver tuned to a corresponding frequency and selecting appropriate time slots of a received TDM data stream.

Claim 23 is amended as follows:

23. (Amended) A wireless unit in accordance with claim 12 wherein said ~~communications channels~~ each communication channel comprises a forward link and a reverse link, and said wireless unit includes means for blocking automatically said reverse link of said ~~communications~~ communication channel for the duration of said broadcast message.

Claim 24 is amended as follows:

24. (Amended) A base station for use in a wireless network, said base station serving a plurality of users via a plurality of communication channels, said base station comprising:

means for transmitting an alert message to a plurality of users, said alert message including the identity of one of said plurality of communications channels, said alert message indicating availability of an imminent broadcast message; and

means for transmitting a said imminent broadcast message to said plurality of users on said one of said plurality of communications channels.

Claim 26 is amended as follows:

26. (Amended) A base station in accordance with claim 24 further including means for sending a further alert message to inform

the users that ~~the channels~~said one of said plurality of communication channels will expire shortly after said base station completes transmission of said ~~prerecorded~~imminent broadcast message.

Claim 27 is amended as follows:

27. (Amended) A method for use in a wireless network, said wireless network comprising a plurality of base stations, each serving a plurality of users via a plurality of communication channels, said method comprising the steps of:

transmitting an alert message from a set of said base stations, to a plurality of users, said alert message including a dialing instruction by which said users may request to receive a broadcast message;

receiving a call placed by one of said plurality of users in accord with said dialing instruction; and

responsive to said call, transmitting a broadcast message from at least one of said set of base stations to said one user on one of said plurality of ~~communications~~communication channels.

Claim 28 is amended as follows:

28. (Amended) The method of claim 27 wherein said communications channels each comprises a forward link and a reverse link and further comprising the step of:

blocking automatically said reverse link of said ~~communications~~communication channel for the duration of said broadcast message.